MICROTEK

LS-3700

A1 Large-Format Scanner

User's Manual

www.microtek.com

Preface

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Safety Precautions

Before using your scanner, read the following safety guides carefully, which detail the proper operation of the scanner and its accessories to prevent injuries or damage to users or equipment.

Meanings of Symbol Signs

CAUTION

This indicates hazardous situation which, if not payed attention, could result injury or damage to users or equipment.

WARNING

This indicates hazardous situation which, if not payed attention, could result serious injury or death to users.

Power Supply:

- Use a power source only with a power rating specified on the marking label.
- Ensure to turn off the power of each device before connecting or disconnecting the cables.
- Insert the plug completely into the outlet, as a loose connection may cause arcing and result in fire.
- Ensure to hold the plug or connector to disconnect the cable; otherwise, if you pull the cable only, it may damage the core wire and result in fire or electric shock.
- Place and route the power supply cord such that it is not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cord near the power plugs, convenience receptacles, and at the point where it exits from the outlet.
- When the scanner is left unattended and unused for long periods of time, unplug it from the wall outlet.

Moving and Storing the Scanner:

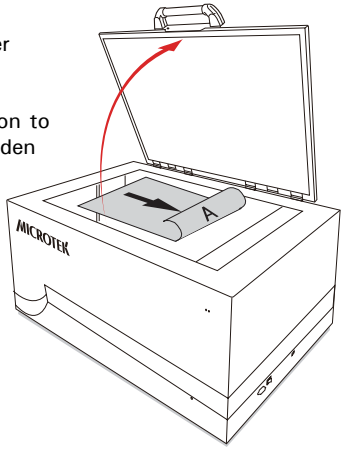
- Always ensure that the scanner is stored properly before shipping or moving it. Quick stops, excessive force, and uneven surfaces may cause the product to overturn when moving.
- Do not hit or drop the scanner. The scanner may be damaged if it receives a strong jolt, which may result in fire or electric shock if the scanner is used without being repaired.
- Do not place the scanner on any slippery, slanted, or unstable surface. The product may slide or fall, causing serious injury to people as well as serious damage to the product.

- Do not use the scanner near water. Never spill liquid of any kinds on the product, or it may result in electric shock or other hazards.
- This scanner should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
- Do not store the scanner in which it may be exposed to direct sunlight.

Using the Scanner

- When opening the upper cover of the scanner, make sure that it has been lifted to a proper position. The quick and sudden drop of the upper cover could result injury or damage to users or equipment.
- When opening or closing the upper cover of the scanner, please use it carefully and watch out for pressing your hands.

Lift the upper cover of the scanner to a proper position to avoid its sudden drop.



Attention: When opening or closing the upper cover of the scanner, use it carefully and watch out for pressing your hands.

Maintenance and Service:

- When the scanner is going to be cleaned, ensure to turn off the power of each device and unplug the power cable from the AC outlet.
- When you need a repair service, unplug the scanner from the power outlet and consult qualified service personnel.
- When replacement parts are required, use replacement parts that are specified by the manufacturer or have the same characteristics as the original parts.

Table of Contents

Preface **2**

Safety Precautions **3**

Knowing about Your Scanner **7**

Features of the LS-3700 7

System Requirements 7

Taking a Closer Look 8

Initiate Setup **9**

Step 1: Unpacking Package Contents 9

Step 2: Installing the Software 10

Step 3: Keeping the Scanner in Place 11

Step 4: Unlocking the Scanner 13

Step 5: Connecting the Scanner 14

Scanning the Materials **15**

Positioning the Materials 15

Using ScanWizard LS (USB) Software 16

Understanding ScanWizard LS (USB) Further **18**

Launching ScanWizard LS (USB) 18

Exiting ScanWizard LS (USB) 18

Familiarizing with the Main Control Panel of ScanWizard LS (USB) 19

Select Frame Button 21

Magnify Button 21

Rotate Counterclockwise/Clockwise Buttons 22

Preview Button 22

Scan to Save Button 22

The Files Menu 24

Save Scanning Settings 24

Load Scanning Settings 25

Restore the Default Settings 26

The Scanner Menu 26

Scanner Info 26

The Window Menu 27
Open a Window 27
Tools Window 28
Advanced ToolBox Window 29
The About Menu 31
User's Manual 31

Cleaning the Glass Surface 32

Maintenance 32

Appendix 33
Troubleshooting 33
Specifications 34

Knowing about Your Scanner

The LS-3700 is a professional scanner exclusively designed for transferring large-format originals into digital formats. The scanner can capture large-size graphs quickly, such as maps and blueprints, providing the professionals a convenient method to digitize the originals for the electric data storage.

Features of the LS-3700

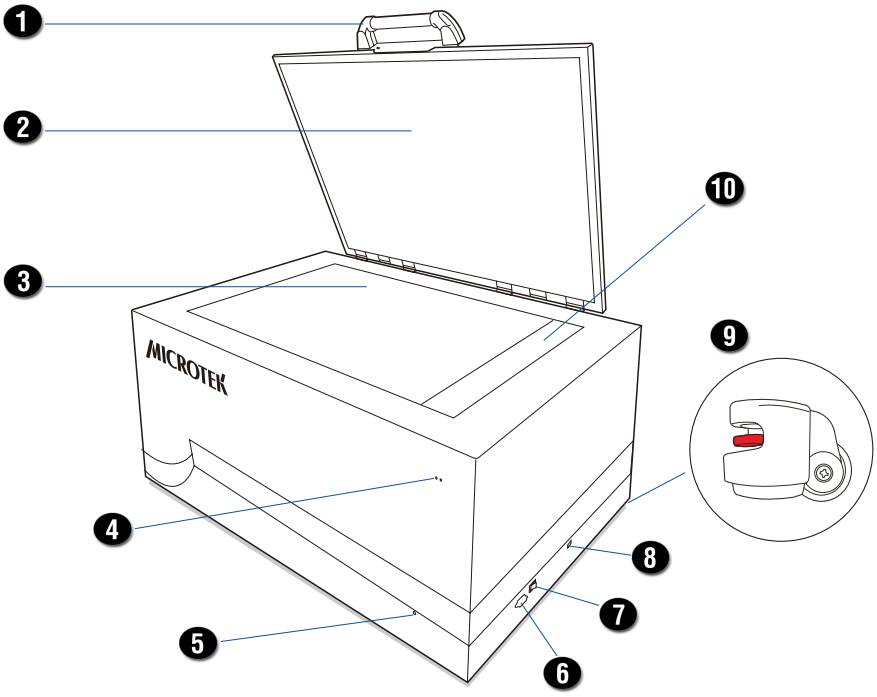
The LS-3700 comes with several important features, including the following:

- Energy-saving two-way LED light source — Adopting two-way LEDs as the light source, when the scanner is detected by the system, there are no requirements for any warm-up time before carrying out the scan, which boots your productivity and reduces energy costs amazingly. With its stable performance, the image quality will remain consistent even after used for a certain period of time.
- Elevating Knobs — There are four Elevating Knobs at the bottom of LS-3700, which ensure that the scanner can be set on the ground stably and strengthen the safety and convenience of using.
- Easy to operate, clean and maintain — The LS-3700 requires virtually no routine maintenance and no daily cleaning, which is ideal for a busy working environment.
- Microtek ScanWizard LS (USB) software — ScanWizard LS (USB) is software exclusively designed for scanning and saving large-format graphs. The friendly user interface of ScanWizard LS (USB) provides users an easy and quick access to initiate.

System Requirements

- DVD-ROM/CD-ROM drive (for installing software)
- Color display with 24-bit color output capability
- 4 GB memory or above
- Intel Core i5 Processor at 3.0 GHz or above
- Microsoft Windows 7 or Windows 8

Taking a Closer Look

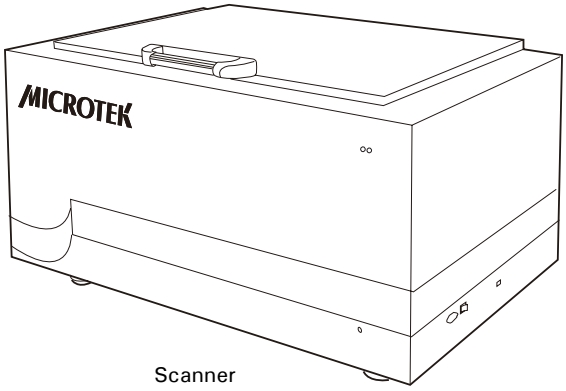


No.	Names of Parts	Functions of Parts
1	Handle	Holds to open or close the upper cover of the scanner.
2	Upper Cover	Covers the scanner bed.
3	Scan Bed	The place where the scanned original is positioned.
4	Indicator (Green)	Displays the status of the scanner.
5	Safety Locks (2)	Locks the scanner cartridge.
6	Power Connector	Connects the scanner to the power adapter.
7	Power Button	Turns the scanner on or off.
8	Hi-Speed USB Port	Connects the Hi-Speed USB (USB 2.0) cable to the computer.
9	Casters with Locks (4)	Used to move or lock the scanner.
10	Ruler	Used as a reference to position a scanned document in center.

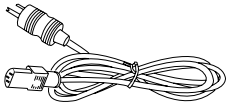
Initiate Setup

Step 1: Unpacking Package Contents

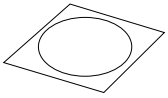
After unpacking your scanner package, please check for the major components listed below.



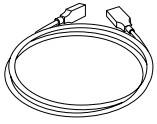
Scanner



Power cord



Software CD/DVD



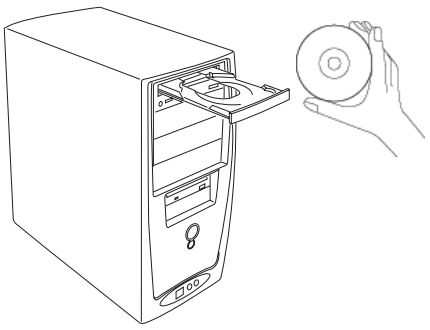
Hi-Speed USB cable

Step 2: Installing the Software

Important: You must install all software before connecting your scanner. Always close any open programs and turn off Anti-virus utilities before installing software.

1. Turn on your computer.
2. Place the **Microtek Software CD/DVD** into a drive.
3. Follow the on-screen instructions to install the driver and software.

   Note: If the Microtek Software Installer screen does not come up automatically, double-click the following in succession: "My Computer"; the CD/DVD-ROM icon; then Setup.exe to start the installer program.



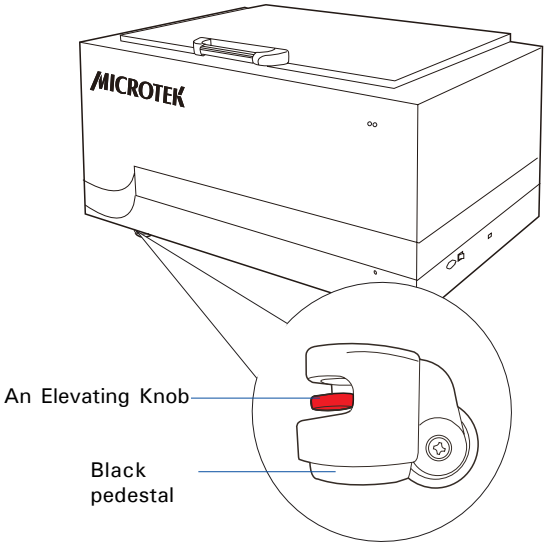
4. Click **EXIT** on the Microtek Software Installer screen when all the software has been installed.
5. Restart your computer.

   Note: If the system displays a message "Found a new hardware" after the computer is restarted, please select the installer program automatically.

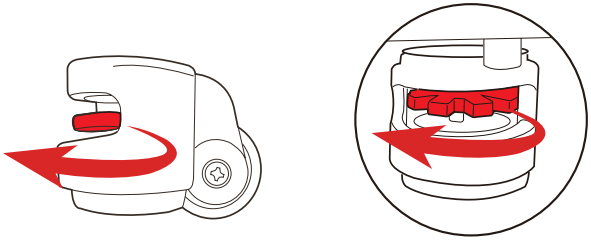
Step 3: Keeping the Scanner in Place

There are four casters at the bottom of LS-3700, which are designed for moving the scanner in convenience. In order to avoid the sudden movement of the scanner which may result injury to users, please put LS-3700 on a flat and stabilized ground before using.

1. Look for and locate the Elevating Knobs next to the four casters at the bottom of the scanner.



2. Spin a red gear of the Elevating Knob clockwise to move down a black pedestal located at the bottom of the Elevating Knob. Continually, spin the red gear until the black pedestal is stabilized on the ground.

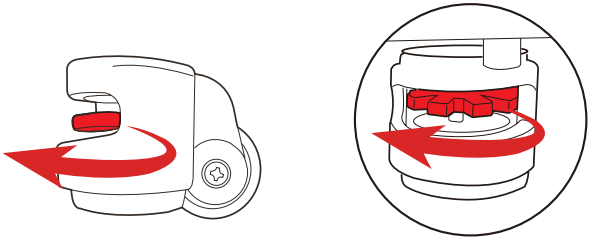


Spin the Elevating Knob clockwise and the black pedestal will be moved down and then touched the ground.

3. Repeat the step 2 until four black pedestals have been moved down and stabilized on the ground.

Note: When you have a need to spin Elevating Knobs and to rise up black pedestals from the ground, follow the steps below:

1. Spin the red gear of the Elevating Knob counterclockwise to rise up the black pedestal located at bottom. Continually, spin the red gear until the black pedestal is fully raised from the ground.
2. Repeat the step 1 until four black pedestal have been moved up from the ground.



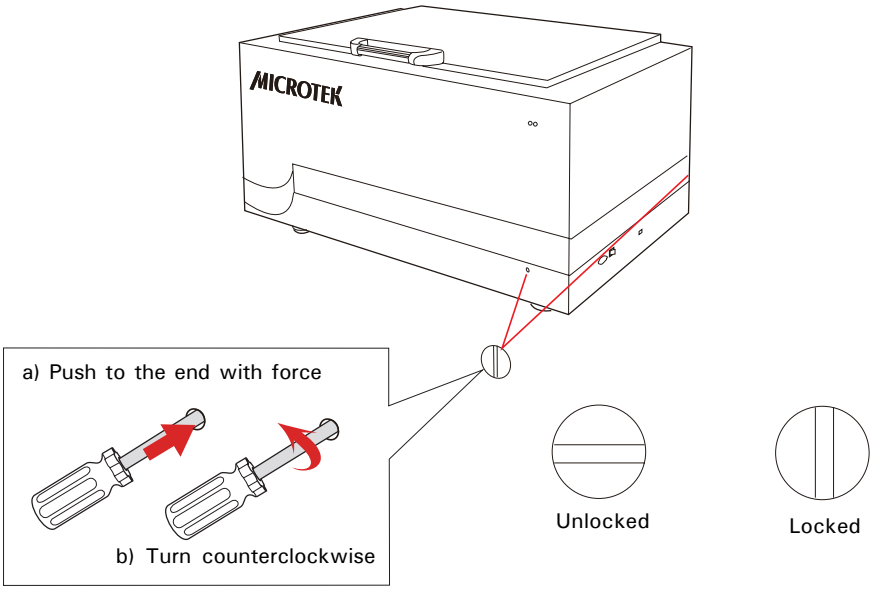
Spin the Elevating Knob counterclockwise until the black pedestal is moved up from the ground.

Step 4: Unlocking the Scanner

1. Locate two locking screws at the right corner of the front panel of the scanner and at the left corner of the back panel of the scanner.

2. Using a flat-head screwdriver, pass through a round circle at the outer shell of the scanner and insert a hollow side of the locking screw: a) push to the end with force, and b) turn the locking screw counterclockwise 90 degrees to the unlock position.

   When successfully unlocked, the screw will push out a little, protruding slightly from the front of the scanner. Also, the pattern of the hollow side of the locking screw will be turned horizontally.



Note: If you have to transport the scanner, you will need to lock the scanner back. Follow the steps below:

1. Turn off the scanner if your scanner is on. Make sure that the power button light (green power light) is off.

2. Turn the scanner back on. Make sure that the Hi-Speed USB cables have connected computer with your scanner properly. Then, activate ScanWizard LS (USB) software program. Make sure that the control panel of the software has been displayed on the screen successfully.

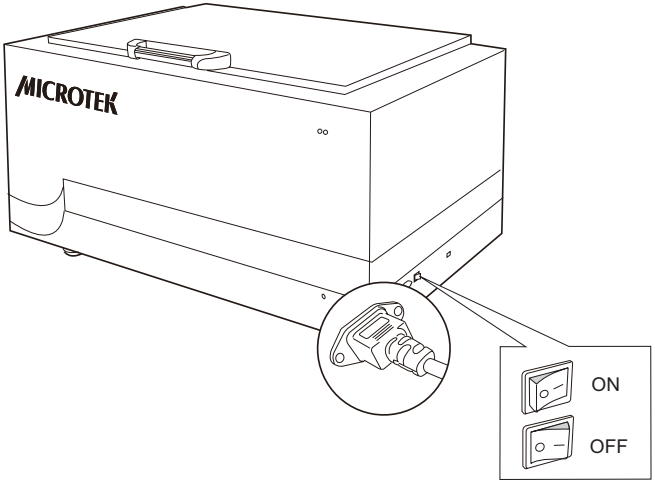
3. Using a flat-head screwdriver, pass through a round circle at the outer shell of the scanner and insert a hollow side of the locking screw. Push down with force and turn the locking screw clockwise 90 degrees to the lock position.

4. Shut down ScanWizard LS (USB) software program and turn off your scanner. Hereby, the scanner is ready for transport.

Step 5: Connecting the Scanner

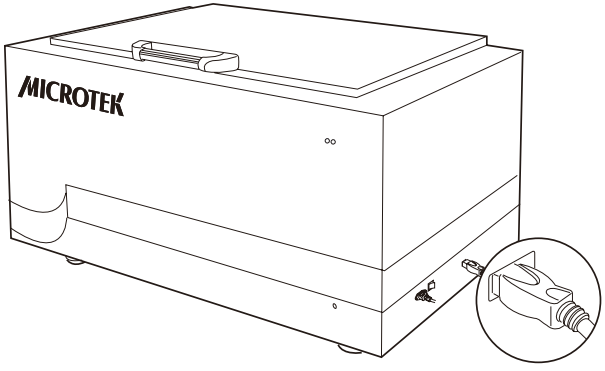
To the Power Adapter

1. Connect one end of the power cord to the right side of the scanner.
2. Plug the other end of the power cord into a power source.
3. Press the Power button to turn the scanner on. When the scanner is on, the power button light (the green power light) will be turned on as well.



To the Hi-Speed USB Cable

1. Connect one end of the Hi-Speed USB cable to your computer.
2. Connect the other end of the Hi-Speed USB cable to the scanner.



Scanning the Materials

Positioning the Materials

1. Lift up the upper cover of the scanner by holding the handle at the front of the upper cover of the scanner.

   Note:

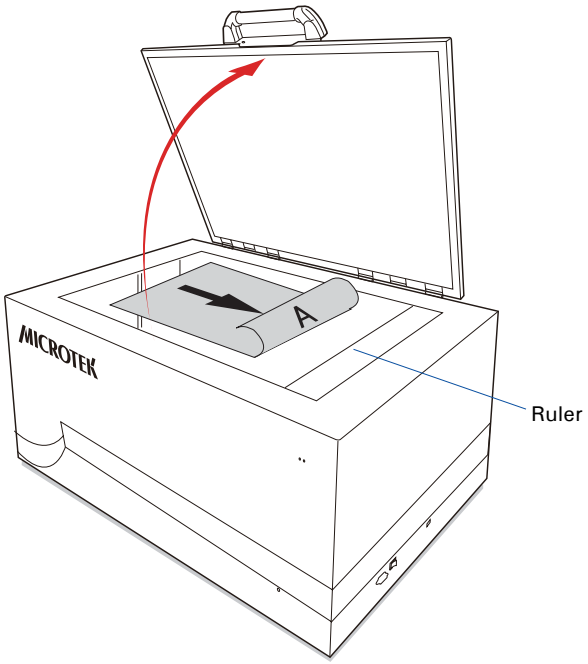
   a) When opening the upper cover of the scanner, please make sure that you have lift up the upper cover to a proper position in order to avoid the sudden drop of the upper cover due to the weight. It may result injury or damage to users or scanner.

   b) The numbers of hinges, used to unite the upper cover and scanner's main unit, can be increased or decreased based on the demands of users. The maximum numbers are up to 6 sets. If you have special requirements toward the numbers of hinges, please contact your local sales for details.

2. Place the material to be scanned face down on the scan bed (scanner glass surface), towards the right of the scanner. Center the top of the original along the ruler on the scanner.

3. Lower the upper cover of the scanner gently.

   Note: When opening or closing the upper cover of the scanner, watch out for the position of upper cover to prevent pressing and hurting for your hands.



Using ScanWizard LS (USB) Software

ScanWizard LS (USB) is scanning software exclusively designed by Microtek for scanning large-size materials. Its user-friendly interface enables the beginners or the professionals to start the scanning process easily and quickly. Refer to the section "Knowing about ScanWizard LS (USB) Further" in back for more details.

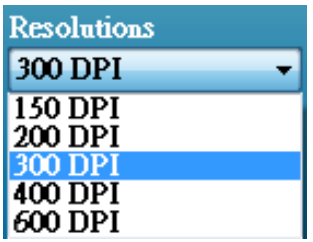
1. Refer to the descriptions in "Positioning the Materials" to place the material to be scanned on the scan bed.
2. Launch ScanWizard LS (USB) and the main control panel will appear on the screen.
3. Click the *Preview* button in the control panel to perform a preliminary view of the entire image. When done, a preview image appears in the preview window.

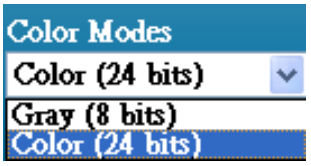
   Note: If you want to cancel the action of the Preview command, press the Esc button on the keyboard.
4. If necessary, click the *Scan Frame* tool button to adjust the size of the scan frame, enclosed within the red dotted lines. Drag on the edge or corner of the scan frame to resize the scan frame.
5. Click the *Window* menu and then select the *Tools* option. The Tools window will appear on the screen immediately. Specify your scanning requirements in the Tools window.

Open the Tools Window and Advanced ToolBox Window from the Window menu

   a) Select your desired image output resolution in the *Resolutions* drop-down menu.

   b) Select your image output type in the *Color Modes* drop-down menu.



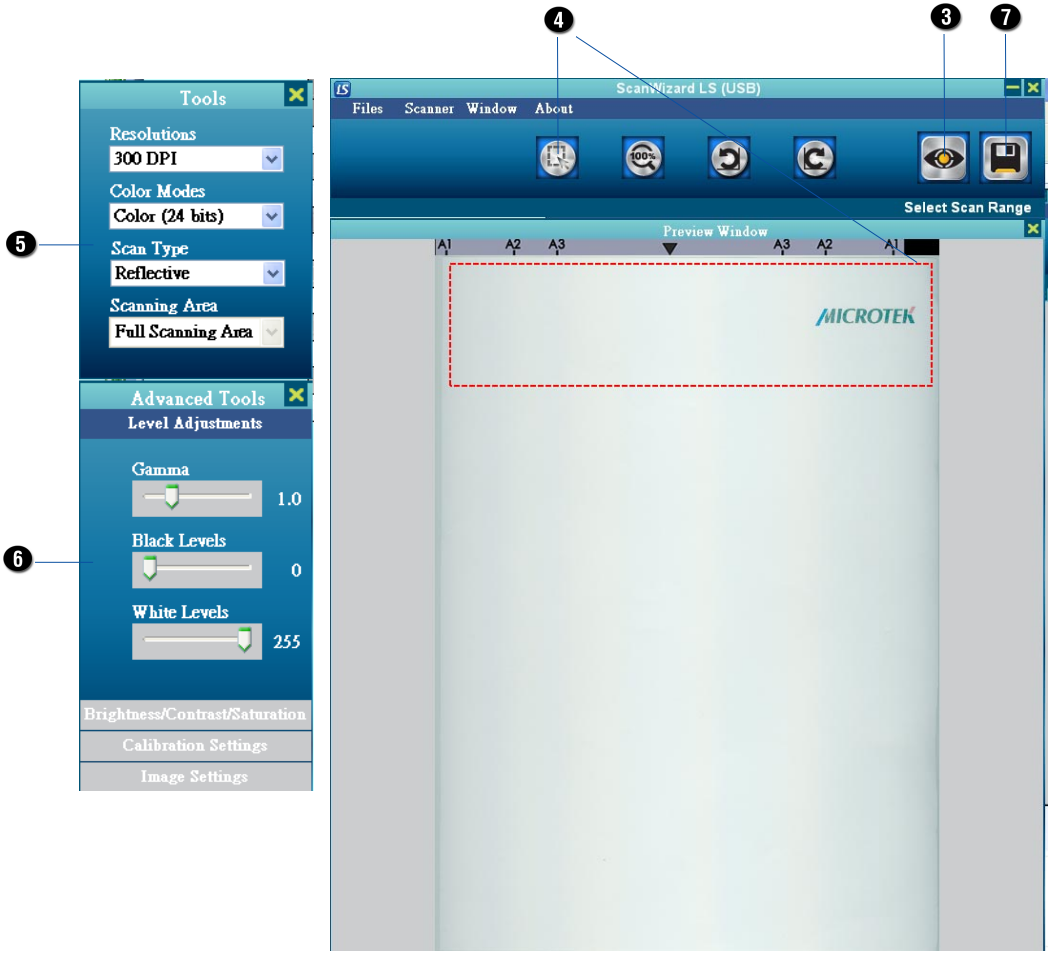


6. If necessary, adjust image quality by using the image correction tools. To activate the image correction tools, click the *Window* menu and then select the *Advanced ToolBox* option. Specify your scanning requirements in the Advanced ToolBox window.

7. Click the *Scan* button to start scanning.

   The material will be scanned and delivered to the directory where you specify.

   Note: If you want to cancel the action of the Scan command, press the Esc button on the keyboard.



Understanding ScanWizard LS (USB) Further

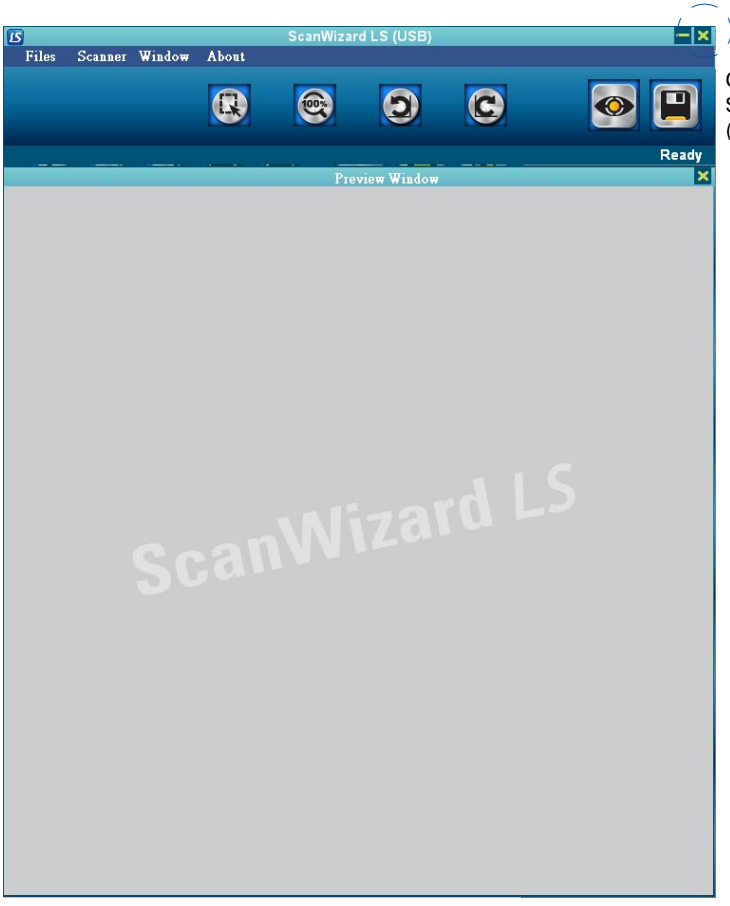
From the previous section, you have gotten a general picture about how to use your LS-3700 together with ScanWizard LS (USB) software. At this chapter, you should be able to get to know commands and functions of ScanWizard LS (USB) software further and better; then, you would be able to manipulate it more conveniently.

Launching ScanWizard LS (USB)

To launch ScanWizard LS (USB), double click the ScanWizard LS (USB) icon on the desktop. After being launched, the main control panel will appear on the screen.

Exiting ScanWizard LS (USB)

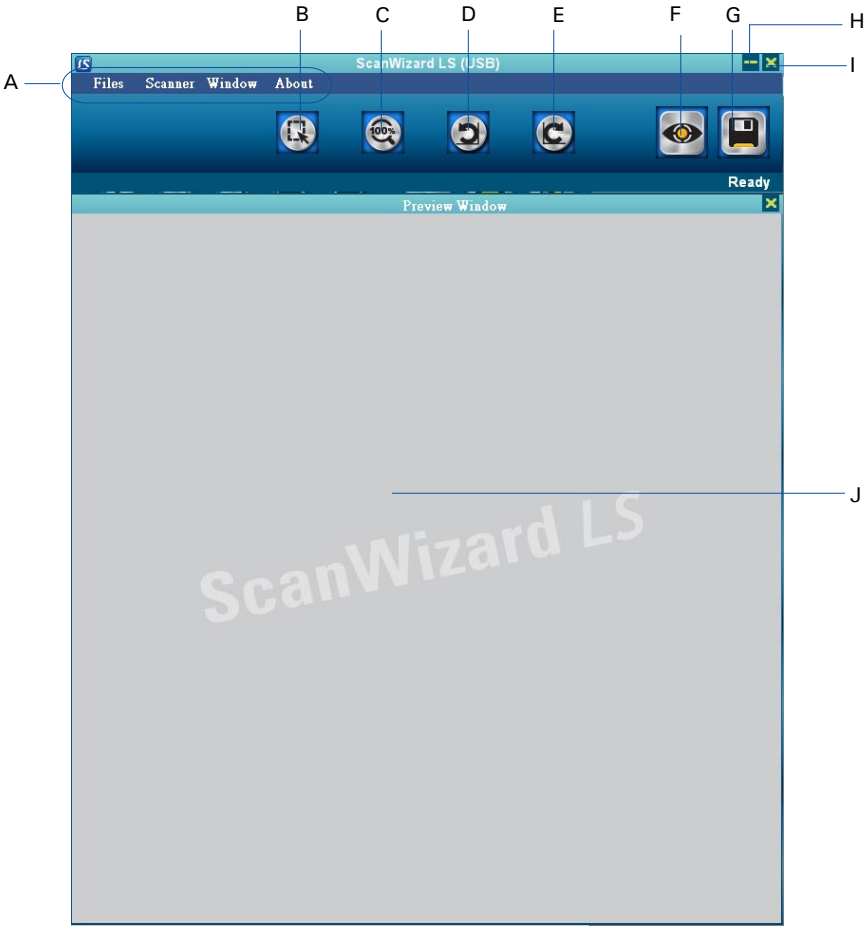
To exit ScanWizard LS (USB), click on the close box on the upper right side of the control panel window.



Familiarizing with the Main Control Panel of ScanWizard LS (USB)

There are major commands, tools and function buttons in the main control panel of ScanWizard LS (USB) which control and dominate your scanner.

Elements on the Main Control Panel



A. Menu bar: Includes Files, Scanner, Window and About options menu.

B. Select Frame button: Used to select and adjust the area to be scanned.

C. Magnify button: Clicks to zoom in (magnify) partial area of a scanned image.

D. Rotate Counterclockwise button: Clicks to rotate an image in the preview window counterclockwise.

E. Rotate Clockwise button: Clicks to rotate an image in the preview window clockwise.

F. Preview button: Clicks to generate a preliminary scanned image.

G. Scan to Save button: Clicks to perform the final scan of the original and save the scanned image to your chosen folder.

H. Minimize button: Clicks to minimize ScanWizard LS (USB).

I. Close button: Clicks to exit ScanWizard LS (USB) software.

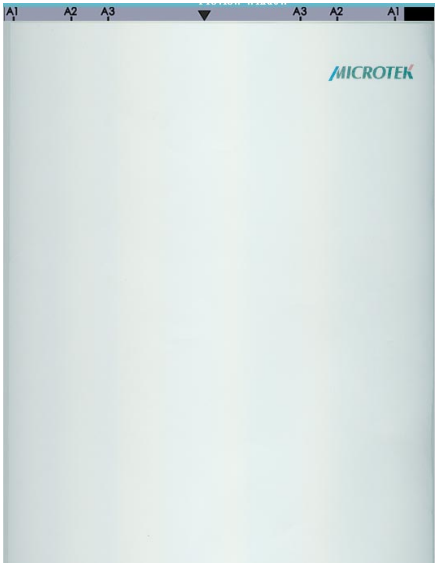
J. Preview area: This area in the Preview window shows the Preview image.

Select Frame Button

The Select Frame button lets you select and adjust the area to be scanned in final.

To draw a frame, click the Select Frame button; then, move the pointer directly to the scanned image and draw a frame enclosing the area to be selected.

To cancel a drawn frame, click the right button of the mouse and then the frame will be removed immediately from the screen.



Scanning without a frame

Scanning with a frame

Magnify Button

The Magnify button lets you magnify (zoom in) the partial area of a scanned image to inspect the quality for after-scan image.

To magnify, click the Magnify button, move the pointer to the area of a scanned image where you want to examine, and then click. The pointed area will be enlarged immediately on the screen. To magnify other area, just move your mouse there and click the left button of the mouse.

To cancel using of a magnify, just click the Magnify button again.

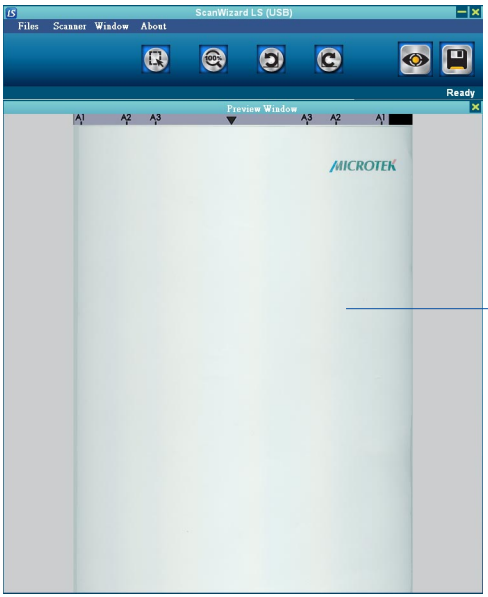
Rotate Counterclockwise/Clockwise Buttons

The Rotate Counterclockwise/Clockwise buttons let you rotate a preview image counterclockwise or clockwise in 90 degrees. When the image in the Preview area (Preview window) is rotated, the ruler at top will be turned in the same direction at the same time, which is helpful for you to check the real position of the scanned image on the scan bed.

Preview Button

The Preview button scans an image based on the settings on the ScanWizard LS (USB) control panel, and displays the preview image on the preview window.

To cancel a preview action, please click the Esc button on the keyboard.



Scan to Save Button

The Scan to Save button scans the images from your scanner and delivers the images to your selected folder.

When the button is clicked, the “Save As…” dialog box appears. Take turns to key in a file name, a saved folder direction and an export file format.

If you want to cancel a scanning job, please click the Esc button on the keyboard.

1. Saved folder direction: To select a folder for your scanned and saved images, either use a folder selected by default or click the Arrow button next to the column to explore, search and select folders you want to use for saving scanned images.

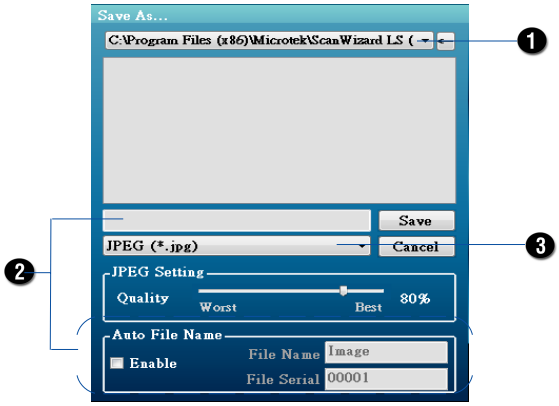
2. File name: This column lets you to key in a desired file name.

   If Auto File Name is enabled, the name entered in the File Name column will become the file prefix, and a serial number added up automatically by the system will be attached afterward.

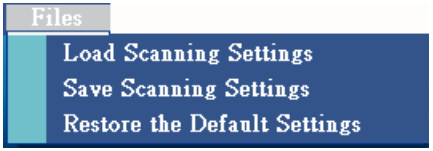
3. File format: This menu box lets you select a file format when saving a file. The supported format includes JPEG, BMP and TIFF.

   If "JPEG" is selected as your file format, you are allowed to adjust qualities by dragging a left-right bar appearing below.

When all settings are done, click the Save button. The Save As... dialog box will be closed and ScanWizard LS (USB) will start to perform the final file scanning and saving.



The Files Menu



The Files Menu lets you:

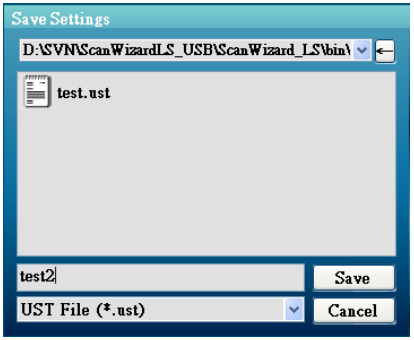
- Save the current scanning settings as a templet and load it at a later time when you work on the same kind of the images
- Load the settings saved earlier and apply them to the current scan job
- Restore scanning settings back to the default settings

Save Scanning Settings

This command lets you save current scanning settings, such as resolutions, color modes, saturation and brightness, as a template when performing a scan job. The saved template can be loaded at a later time when scanning the same kind of the images.

To use the Save Scanning Settings command:

1. Click the Files menu and then select “Save Scanning Settings” option.
2. When “Save Settings” dialog box appears on the screen, enter the desired folder direction and file name and then click the Save button to save.



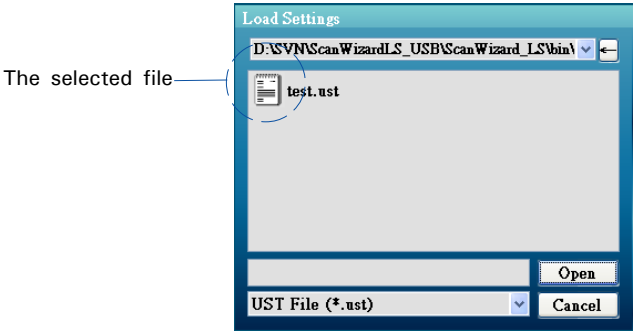
3. When done, the Save Scanning Settings dialog box will be closed and you will be directed back to the window of the main control panel.

Load Scanning Settings

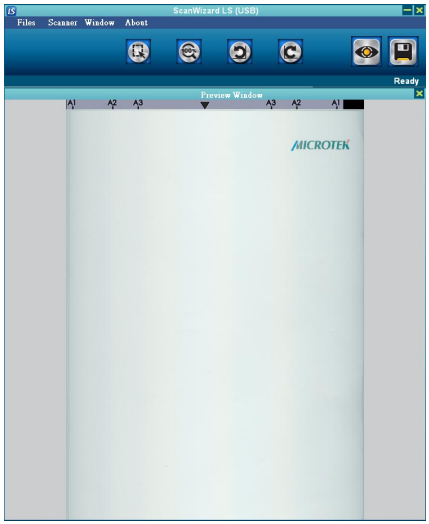
This command lets you load and use image settings that you have saved earlier, such as resolutions, color modes, saturation and brightness, helping you to save time on doing tedious and repetitious settings and improving work efficiency.

To use the Load Scanning Settings command:

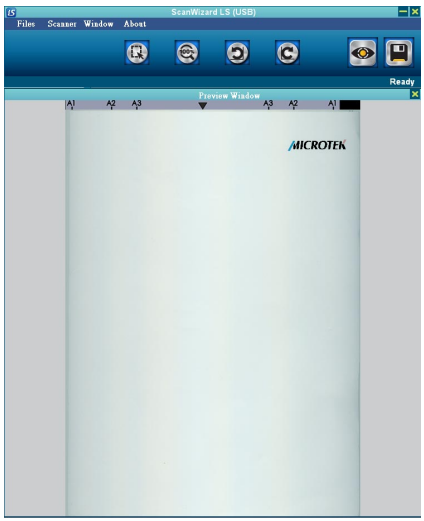
1. Click the Files menu and then select “Load Scanning Settings” option.
2. When “Load Settings” dialog box appears on the screen, explore folders to find out the file you want to use; then, click the Open button to load the selected file.



3. The settings of the selected file will apply to the preview image in the preview area immediately.



The original image

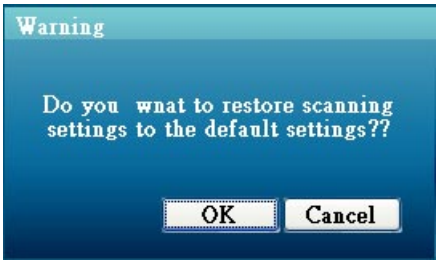


The image after being applied with selected file settings

Restore the Default Settings

This command cancels the current settings used for the scanned image and retrieve the default values of factory settings.

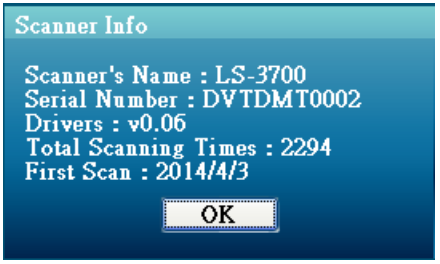
When this command is selected, a window appears on the screen to remind you that values of current settings will be restored back to default setting values. Click the OK button to carry out the action.



The Scanner Menu

Scanner Info

This command provides information about your current scanner. When you choose this command, a dialog box appears showing the scanner name, the scanner serial number, the driver version and the total scanning times.



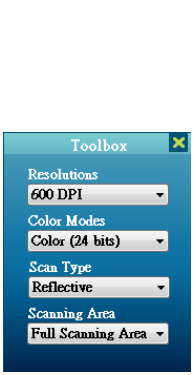
The Window Menu

The Window menu lets you open or close Preview Window, Tools Window and Advanced ToolBox Window in ScanWizard LS (USB) software.

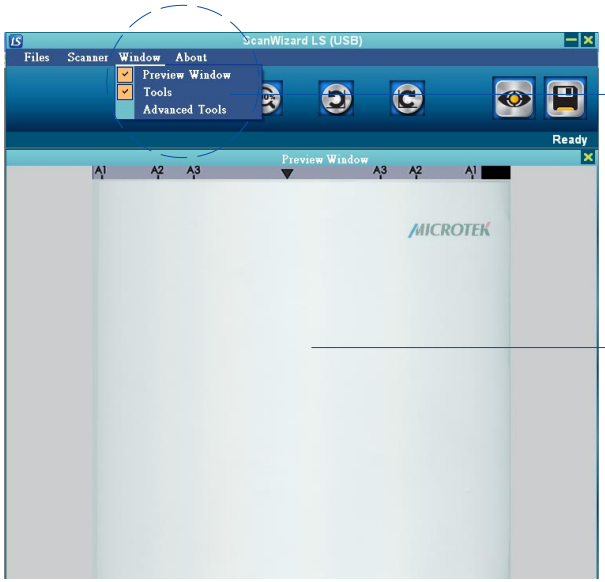
- Preview Window: The Preview Window contains a preliminary image scanned by your scanner.
- Tools Window: In the Tools Window, you can set up basic settings about your scan job, such as resolutions and color modes.
- Advanced ToolBox Window: In the Advanced ToolBox Window, ScanWizard LS (USB) offers you advanced imaging settings to practice, such as color level, contrast, saturation and calibration, which are designed for the professional users in order to satisfy with their specific demands. If you like to restore the values of settings back to default values, please use “Restore the Default Settings” in the Files menu.

Open a Window

1. Use the mouse to click the Window menu and select one of three windows you like to open (for example, *Preview Window*).
2. A check mark (√) will appear in front of the window which is selected. Also, the selected window will appear on the screen.



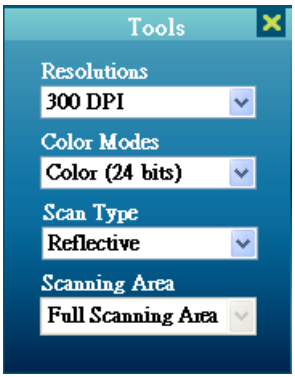
Tools Window



Preview Window and Tools Window are selected and therefore are marked with check marks

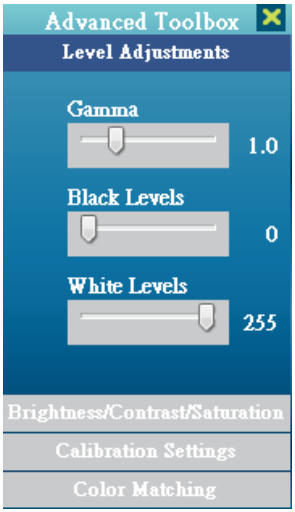
Preview image appears in the preview area

Tools Window



- Resolutions: Select a desired resolution for outputting the image from a drop-down menu. The options are *150, 200, 300, 400* and *600 dpi*.
- Color Modes: Select a desired image output type from a drop-down menu:
  - Select *Color (24 bits)* to scan the image in color
  - Select *Gray (8 bits)* to scan the image in gray
- Scan Type: Select a desired image input type from a drop-down menu. The option is *Reflective* or *Transparent*. This option can be selected only when the connected scanner supports.
- Close button (x): Click to close the Tools Window.

Advanced ToolBox Window



Under the Advanced ToolBox Window, there are four sub-menus which you can use for coloring settings for scanned images. To open and extend each sub-menu, just use the mouse to click it; then, you can start to change settings on each sub-menu. All changes you made will be applied to and shown on the preview image immediately.

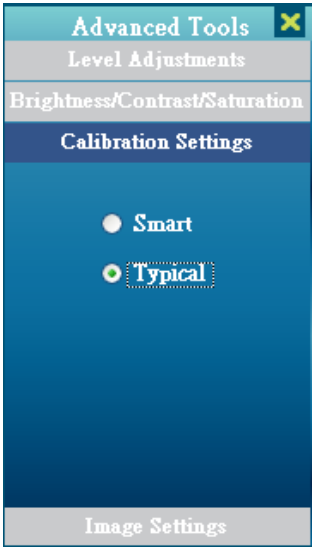
Level Adjustments

- Gamma: Drag the slider left or right to adjust Gamma values of images.
- Black/White Levels: Drag the slider left or right to adjust the dark or light levels of images.

Brightness/Contrast/Saturation

- Brightness: Drag the slider left or right to adjust brightness values of images; therefore, you can change the lightness of images.
- Contrast: Drag the slider left or right to enhance the contrast of images; thus, you can approve the stereoscopy of images.
- Saturation: Drag the slider left or right to increase or decrease the color intensity of images.

Calibration Settings



This sub-menu lets you choose which type of calibrations you like to perform before each scanning.

- Smart Mode: When this mode is checked, the ScanWizard LS (USB) will memorize the calibration values generated by different scanning settings. These memorized settings can be used later when a scan job with a same value of scanning settings is performed again. This mode eliminates calibration time and therefore enhances the scanning speed when you often scan materials sharing same scanning settings.
- Typical Mode: If this option is selected, the ScanWizard LS (USB) calibrates your scanner before performing a scan job if the scanning settings are changed. It is the default setting of the system.

Image Settings

This sub-menu lets you choose the path for the CMS Profile.

The default setting is *LS3700.icm*.

The About Menu

The About menu lets you access the user's manual for ScanWizard LS (USB), and gives you related information about the ScanWizard LS (USB) scanning software and its supported website.

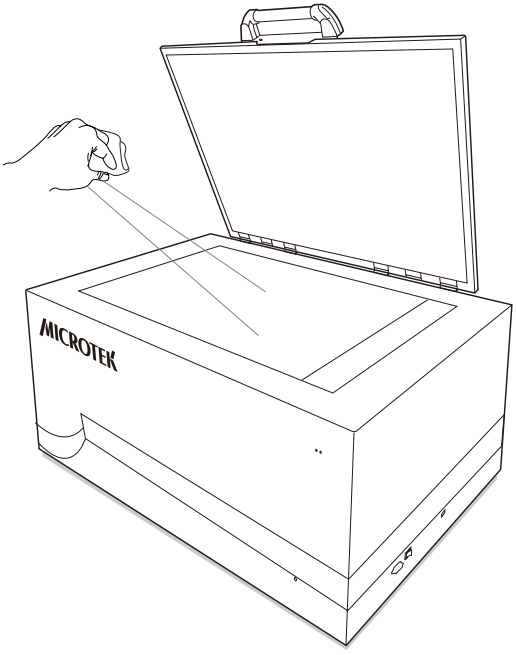
User's Manual

When this option is selected, a folder will appear on the screen. In the folder, you can find user's manuals related to supported scanner models and relevant language versions. Please select one which is fit to your demand.

Cleaning the Glass Surface

To ensure optimal performance for the LS-3700, it is important to clean the glass surface of the scanner on a regular basis.

First, lift up the upper cover of the scanner. Make sure that it has been lifted up to a proper position for safety. Then, use a soft, non-abrasive and lint-free cloth to gently wipe the glass surface area on the scanner's flatbed.



Maintenance

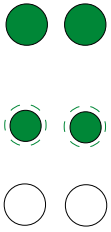
After usage for a period of time, the parts inside your scanner, such as the light source, may become worn out, and a problem such as insufficient light supply may occur. In this cases, contact your local dealers or wholesales for the maintenance services.

Note: Your scanner need a professional to perform the required service or maintenance. Do not attend to fix or perform the maintenance by yourself, or it may cause dangers to you or the scanner.

Appendix

Troubleshooting

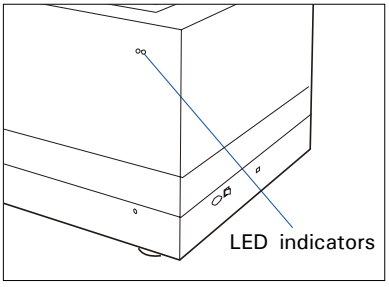
The LEDs on the front-right panel of the scanner indicate the status of the scanner.



All On - ScanWizard LS (USB) software has been activated and the scanner is found. Ready to scan

Flashing - Scanning

All Off - Scanner is off



First, make sure that you have followed steps as described in the "Initial Setup" section of this document. Then if your problem is listed here, try the suggested solution.

1. **No light comes on when the scanner is turned on.**
   Make sure your scanner is connected to your computer and plugged into a power source.

2. **The Add/Remove Hardware Wizard appears on your screen.**
   Click the "Cancel" button and close the ScanWizard LS (USB) scanning software. Disconnect the Hi-Speed USB cable from your computer, and refer to the installation instructions in this document.

3. **When trying to scan, an error message appears on your screen that reads, "Can't Find Scanners".**
   Make sure your scanner is unlocked (see "Unlocking the Scanner" in the "Initial Setup" section).

   Make sure your scanner is connected to your computer and plugged in to a power source (see "Connecting the Scanner" in the "Initial Setup" section).

   Uninstall and reinstall the ScanWizard LS (USB) software.

4. **After clicking "Scan," a blank screen appears.**
   Make sure your scanner is unlocked (see "Unlocking the Scanner" in the "Initial Setup" section).

   Uninstall and reinstall the ScanWizard LS (USB) software.

Specifications

Model Name	LS-3700
Model Number	MLS-600A1
Image Sensor	CCD
Light Source	LED (Light Emitting Diode)
Scanning Modes	Color, grayscale, and black-and-white in a single scanning pass 24-bit color 8-bit grayscale
Color Depth	48-bit (Input); 24-bit (Output)
Resolution	600 dpi
Scanning Area	24" x 37.01" (635 mm x 940 mm)
Scanning Speed	45 sec @ 300 dpi, A1 color
Interface	Hi-Speed USB (USB 2.0)
Dimensions (L x W x H)	52.4" x 34.3" x 28.3" (1330 mm x 870 mm x 720 mm) (Upper cover is not included)
Weight	374 lbs. (170 kg)
Voltage	AC 100V to 240V, 50-60 Hz 1.7A Max (Input)
Environment	Operating temperature: 50° to 95°F (10° to 35°C) Relative humidity: 20% to 85%
Warranty	Machine: 50,000 scans @ 300 dpi, A1 size or 1 year for normal use Upper cover: 10,000 times Scanner's glass: No warranty

Important

Please never attempt to open or service the machine by yourself; or, this will void your warranty.

Specifications, software bundles, and accessories are subject to change without notice. Not responsible for typographic errors.